

Proceedings from
"The Land Supports Us All"

January 14 - 16, 2002



Land Use
Conference

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The Ag Summit Process was a consultation process aimed at stimulating candid discussions from industry, government, and other stakeholders. This Land Use Conference grew out of that process.

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Table of Contents

Executive Summary	i
Introduction	iii
Background.....	iv
Purpose	v
Goals	v
Agenda	1
Using a Finite Resource (Opening Plenary Session – Evening)	5
Identify the Current Situation (Plenary Session)	6
Needs, Future Trends and Opportunities (Plenary Session).....	11
Identify Solutions and Options (Concurrent Sessions)	15
Where To From Here? (Plenary Session)	15
Appendix A – Contributors	19

Executive Summary

Only five percent of Canada can be used to grow food (working lands). Yet that same five percent is also being used or fragmented by alternate land uses. Resource development and other land uses such as transportation improvements make rural agricultural and forested areas more easily accessible. Increasing numbers of Albertans want to access them. Demands on the land for recreation, rural living, transportation corridors and most importantly, for resources (including agriculture) are rising steadily. These demands arise from our prosperity which fuels society's wants and needs for materials.

To address the challenges brought about by the increasing and overlapping use of a finite land resource in Alberta, a three-day conference was held in January 2002. The "Land Supports Us All" Land Use Conference brought together the major sectors of Alberta, including municipal, provincial and federal representatives and the research community. The goal of this conference was to bring stakeholders together so that they could start to share their vision for a sustainable future given the overlapping demands for land.

Over thirty speakers shared their views with about 800 delegates. The key messages from many of these speakers are presented chronologically in this proceedings document.

The plenary session, **Using a Finite Resource**, established that humans are doing some things right but other things need to change. "Adaptive management" is what sets the stage for progress for land use decisions on working landscapes. Collaboration and cooperation across disciplinary and operational lines is the future of natural resource management.

In the **Identifying the Current Situation** session, inter-relationships among all sectors and the cumulative affects of numerous uses were highlighted. Representatives from forestry, energy and minerals, agriculture, environment, wildlife and tourism and recreation spoke about the affects of land use issues on their sectors. Although many of the speakers brought sectoral specific perspectives to the fore, many core concepts were emphasized. In particular, three distinct phases of land use in Alberta were identified:

1. Yesterday's situation where human exploitation of the landscape occurred with a "Frontier is Open" attitude;
2. Today's situation where various land users are actively competing and conflicts are arising;
3. Tomorrow's situation where cooperation and communication are dictating land users actions.

Alberta is currently transitioning into the third phase where competition for land is forcing industries to adopt more intensive practices and to communicate so new ways of sharing land and reducing disturbance can be adopted. This communication and cooperation is a critical challenge facing Albertans. Albertans need to decide what they want the future landscape to look like and agree on a plan to achieve that vision. Indeed, several industry representatives acknowledged the 'social contract' they need to maintain with Albertans to stay in business. One

speaker noted the need to “determine acceptable levels of resource use to stay in business while also considering the impact on society’s rights, values and expectations”.

Part of meeting this need is that there are losses. Incorporating the principles and strategies of integrated resource management can reduce these losses. Carrying the concept further, it was noted that development of a land use planning approach that strikes a fair and effective balance between agriculture, the environment and the broader rural and urban communities is a possible way forward. One key message that arose from this session was where do we want to go, how do we get there and, how do we set up measurements so that we know when we’ve arrived at where we want to go.

The final session titled **Where To From Here?** resulted in an outline for the next steps in the process. It was recognized that the main theme of the conference highlighted the need for change, how it could be managed and the need to work together. Doing the same things in the same way is not sustainable for the environment or the economy and will not achieve society’s goals.

One of the ways forward that recognizes the resource base and the changing realities involved with managing the resources is through integrated resource management (IRM). This approach was recognized by the government’s 1999 Commitment Document, which outlines a series of IRM activities. IRM activities involve determining the coherence and coordination of policies and legislation, but more importantly, beginning the dialogue with Albertans through consultation and involvement at broad and at fine scale planning levels. IRM means that an iterative, integrated and flexible system is required, not top-down planning. It was emphasized that the land base should be shared for its highest and best use. A number of pertinent questions were asked to start people thinking about and discussing the waste of what Albertans cannot replace - land.

Introduction

The same five percent of Canada that can be used to grow food is also used for most of our economic endeavors, outdoor recreation and cities. Alberta's land base is no exception. Our beautiful and bountiful province is experiencing increased demands on our working lands.

Alberta's cities are some of the fastest growing. For example, the population of Calgary has been growing exponentially (at three percent yearly) since the early 1900s. It is now near one million people. Calgary's affects on the landscape (the ecological footprint) has increased by two and one half percent yearly over the same period. Even without an increase in growth rates, Calgary's population is estimated to soar to three million people over the next forty years, and is expected to cover another one-thousand five hundred square kilometers. Our larger population reflects increased economic activities which also compete for the use of our land.

Technology and transportation improvements make rural areas more easily accessible and many want to access them. Demand for resources, exploration, recreation, rural living, transportation corridors and agricultural products is rising steadily. To bring all stakeholders together and begin a dialog which will lead to a balancing of interests and a sustainable future within the context of overlapping demand, a three day conference was held in January 2002.

The conference grew out of an ongoing interaction between government and the agri-food industry. Decision makers from government and key economic sectors were instrumental in its planning and contributed to its success. The Rural Education and Development Association/REDA (<http://www.compusmart.ab.ca/ruraled>) hosted this successful, first of its kind, conference, and the achievement illustrated the growing interest in determining how our lands support us.

During the three days, over thirty speakers shared their views with 800 delegates. The key messages from these speakers are presented chronologically in this publication.

Background

In the late 1990s, Alberta's Agriculture, Food and Rural Development and the Agri-food industry were tackling a host of challenges. One of the challenges was that Alberta, just as the entire world, was quickly developing the land that produces food and fiber, forest products, wildlife habitat, and clean air and water. To address this and the other challenges and discuss ways to achieve a competitive global position for our agriculture industry, a process was needed.

Since the province had already established a collaborative approach in previous consultations with the agri-food industry¹ to advance innovation, address challenges, and seize opportunities, the province continued its collaborative approach. With the Industry's assistance, the Ag Summit process was initiated in February 2000. The vision of Ag Summit was to create a collaborative, positive business climate that supports the continued growth of a profitable, environmentally sustainable, agriculture and food industry in Alberta.

Ag Summit 2000 took three years to complete and involved thousands of Albertans from all parts of the province. Open and candid discussions by individuals in the industry were encouraged. Through focus groups and meetings, 10 priority clusters of issues, challenges, and opportunities were identified. Participants then formed groups, called Action Teams, to further examine one or more of the identified clusters. They then made recommendations that could assist industry and/or government to overcome challenges or take advantage of opportunities.

The Land Use Core Action Team was one of the groups formed early in the Ag Summit process. Its responsibility was to discuss land use concerns. In addition to conducting a large number of information sessions to gather information, the team formed a sub-committee that planned a major land use conference called "The Land Supports Us All" Land Use Conference.

"The Land Supports Us All" Land Use Conference was held January 14, 15 and 16, 2002 at the Shaw Conference Centre in downtown Edmonton. It brought all interested parties together for the first time in Alberta to begin a dialog towards a balanced use of land that considers everyone's interests. The conference was a major industry/government consultation process that promoted collaboration between diverse groups that utilize Alberta's land base.

¹ Such as: Creating Tomorrow - 1992, Getting Down to Business - 1995, and the Growth Summit - 1997.

Purpose

During the three days of the Land Use Conference 2002, presentations, plenary sessions, breakout discussions and a showcase for displays were available. The conference was designed to provide a forum to:

- share land use information and explore the inter-relationships amongst sectors
- focus on the needs of all sectors and acknowledge the interactions of those needs
- examine some unique options and opportunities from many jurisdictions.

These proceedings capture the key messages presented at the conference. The conference provided independent information about the affects of man's activities (the ecological footprint) on our working landscape. The need for balance within the multiple-uses of our land was also identified, and it called for a public dialog about new approaches that will manage growth in a sustainable fashion.

Goals

Key decision makers from government and main economic sectors came together at the Land Use Conference 2002 to discuss the growing accessibility to land, interconnections of numerous land uses and competition for our working lands. The goals of the conference were the following.

- Bring stakeholders together so that each gains a better understanding about each other's perspectives. Current issues and future trends of growth, environmentally sustainable development, and impacts of cumulative effects and land use conflicts in Alberta were discussed.
- Provide decision makers with new tools and concepts for practical solutions and incentives.
- Establish new contacts and networks that foster professional and cross-sector linkages, and promote inter-municipal cooperation to help develop the vision and long term planning of the agri-food industry.
- Recognize opportunities that increase compatibility and thereby assist in minimizing adverse effects of human activities
- Provide innovative solutions to land use conflicts.
- Provide input through the Land Use Core Action Team to the Ag Summit Process which contributed to a provincial land use strategy.

Agenda

"The Land Supports Us All" Land Use Conference

January 14, 15 and 16, 2002

Location: Shaw Conference Centre, Edmonton, Alberta

MONDAY, JANUARY 14, 2002

USING A FINITE RESOURCE (OPENING PLENARY SESSION - EVENING)

Overview of the challenge of balancing sustainable food production, a rising population / expanding economy and quality of life."

- Harvey Buckley, President, Action For Agriculture and Conference Chairman
- Hon. Shirley McClellan, Deputy Premier, Minister of Agriculture, Food and Rural Development
- Dr. Jack Ward Thomas, Chief Emeritus, US Forest Services

TUESDAY, JANUARY 15, 2002

IDENTIFY CURRENT SITUATION (PLENARY SESSIONS)

Opening Speech: Brad Stelfox of Forem Technologies - **Presents the facts/stats;**
Summarize inter-relationship between all sectors; Cumulative effects

Panel: Experts representing the following sectors report on how their sector is affected by land use issues

Forestry

- Bob Demulder, Director of Forestry and Transportation, Alberta Forest Products Association

Energy and Minerals

- Roger Shaneman, Manager of Resource Access, Canadian Association of Petroleum Producers (CAPP)

Agriculture

- Dean Smith, Project Manager, Prairie Agricultural Landscapes: A Land Resource Review

Urban Development

- Paul Taylor, Chairman, Urban Development Institute - Calgary Chapter

Environment, Wildlife, Tourism and Recreation

- Tom Cameron, Professional Biologist, Alberta Sport, Recreation, Parks and Wildlife Foundation

LUNCH Speaker: Jack Ward Thomas, Chief Emeritus, US Forest Service
A Conservationist's Perspective

TUESDAY, JANUARY 15, 2002 - AFTERNOON

IDENTIFY NEEDS, FUTURE TRENDS AND OPPORTUNITIES (PLENARY SESSIONS)

Panel: Experts focus on needs and acknowledge how their needs impact the other sectors

Forestry

- Dr. Stan A. Boutin, Industrial Research Chair, Integrated Landscape Management, University of Alberta

Energy and Minerals

- Peter Koning, Integrated Landscape Management Program, Alberta Chamber of Resources

Agriculture

- Brian Heidecker, Co-chair Ag Summit 2000

Urban Development

- David Baxter, Executive Director Urban Futures Institute

Environment, Wildlife, Tourism and Recreation

- Lorne Fitch, Provincial Riparian Specialist, Alberta Fish and Wildlife Service

WEDNESDAY, JANUARY 16, 2002

IDENTIFY SOLUTIONS AND OPTIONS (CONCURRENT SESSIONS)

Numerous presenters in 'Select a Session' format (Q and A from floor included)

– what is happening here and elsewhere in the world

Addressing Urban Sprawl

Collaborative Approaches to Community Stewardship

Luther Propst and Carole Stark, Sonoran Institute

Smart Growth Principles for Sustainable Urban Development

Cheeying Ho, Smart Growth BC

Garry Davidson, Huron County

Keith Schneider, Michigan Land Use Institute

Land Use Planning in the Edmonton Region

Jim Visser, The North Edmonton Association

"To Please Save Our Irreplaceable Land"

Image and Importance of Agriculture

Edith Svanes, Ag Summit Action Team

Preservation of Agricultural Land

Land Trust Programs in Alberta

Francis Gardner, Southern Alberta Land Trust Society

Benefits of Conservation Easements

Jim Campbell, Nature Conservancy of Canada

Overview of American Preservation Policies and Programs

Keith Schneider, Michigan Land Use Institute

Jeff R. Jones, American Farmland Trust

Environmental Stewardship Incentives

Contracting for Environmental Goods and Services

Craig Evans, Florida Stewardship Foundation

Ecological Fiscal Reform in Canada

Jean M. Bélanger, National Round Table on the Environment and the Economy

Conservation Cover Incentive Program

Cynthia Edwards, Ducks Unlimited Canada

Voter Attitudes: Conservation and Food

Jeff R. Jones, American Farmland Trust

Ecological Goods and Services: Farm Products?

Gord Kerr and Ernie Ewaschuk, Ag Summit Action Team

Aboriginal Land Use Issues

Municipal Governments and Aboriginal Land Use Issues

Lorne Ternes and Rick McDonald, Tamera Services

Aboriginal and Treaty Rights and Industrial Development on Public Lands

Lorne Ternes and Rick McDonald, Tamera Services

Landscape Planning

Integrated Resource Management

Al Sanderson, Alberta Environment

Integrating Grizzly Bear Conservation and Land Use Activities

Gord Stenhouse, Foothills Model Forest Project

Charting a Path

Ian W. Dyson, Prairie Conservation Forum

Case Study: Land Use Planning for Tourism Development

Brian Irmen, Clearwater County

A New Paradigm for Protected Areas: The Role of "Protected Landscapes"

Dr. Guy Swinnerton, University of Alberta

Provincial Land Use Framework: Alberta's Options

Candace Vanin and Peter Aschenmeier, Ag Summit Action Team

Environmental Ethics as a Component of Environmental Management in Peru

Edme Landeo, National University of Ancash

Evaluating Landscape Suitability and Impacts

Agricultural Land Evaluation Study

Jim Hiley, Agriculture and Agri-Food Canada (AAFC)

Sustainable Communities: A Watershed Planning Approach

Richard Quail, Town of Okotoks

Identification and Mapping of Environmentally Sensitive Landscape Features

Neil Gilson, AAFC

The Alberta Forest Biodiversity Monitoring Program

Chris Shank, Alberta Fish and Wildlife Service

Case Study: Planning in Beaver County

David Gibbens, AAFC

Organization Examples

Smart Growth B.C.

Cheeying Ho, Executive Director

Ontario Smart Growth

Gary Davidson, Huron County

WHERE TO FROM HERE? (CONCLUDING PLENARY)

Summarize the two days and outline proposed next steps.....not next steps as in solutions, but in the process

Present options for consideration and recommendations currently being worked on;

Acknowledge weaknesses and strengths of options as it impacts all sectors

- **John Donner**, Alberta Environment (Moderator)
- **Faye Street**, East Kootenay Livestock Association
- **Peter Miller**, Land Resource Partnership/Alberta Chamber of Resources
- **Alan R. Musselman**, Land and Community Planning, Pennsylvania

Using a Finite Resource (Opening Plenary Session – Evening)

"The Land Supports Us All" Land Use Conference was officially opened Monday evening by the Chair of the Conference Planning Committee, Harvey J. Buckley. The Deputy Premier and Minister of Agriculture, Food and Rural Development, the Honourable Shirley McClellan then welcomed the audience and expressed her personal and the government's support for the process.

Dr. Jack Ward Thomas, Chief Emeritus, US Forest Services, set the positive mood for the conference. He provided a constructive view of the human's interaction with our environment. "Humans," he said, "have, and have always had, big problems in living in a sustainable fashion in the environment.... It is an ongoing challenge...." But it is a challenge that we have overcome once we recognized it.

He went on to described "the many dramatic turn-arounds in how we relate to our environmental challenges...." These 'turn-arounds', as he calls them, have led him to his "continuous resolute optimism." He continued to say that "[i]n general, air quality is improving after worsening steadily for most of the 20th century. In general, water quality is better. In general, soil protection has steadily improved."

Dr. Thomas' 44 years experience in land management leads him to say that land management will increasingly take place with ever expanding consideration of cross-boundary effects and more complete incorporation of ecological, legal, social, and economic considerations." North Americans, he said, are making considerable progress. But, "we must live and, we hope, prosper on the land that we have -- those frontiers are closed."

Dr. Thomas then pointed to three new frontiers that will allow us to live within the constraints of our environment. These frontiers are learning and the development of technology and its appropriate applications, spiritual development and understanding that broaden ethical considerations to include the land itself, and education of succeeding generations.

He suggested that there are some things we are doing right and others that need to be changed. Progress, he said, continues to be by "adaptive management". This is that "we do, evaluate results, revamp, and try again doing a better job each time around."

Dr. Thomas pointed to the myriad of backgrounds and disciplines represented in the audience. "[W]e must work through, across, and around these artificial boundaries," he said. "[T]he future of successful natural resource management lies in cooperation and collaboration across disciplinary and operational lines."

Dr. Thomas addressed everyone when he said, "[i]t is our job to lead. We have the most important job in the world – individually and collectively. For, if we fail, nothing else – absolutely nothing else matters. We deal with, exploit, care for, nurture, and husband natural resources. That, in turn, is the foundation upon which all human endeavors are structured."

Identify the Current Situation (Plenary Session)

The first full day of the conference involved plenary sessions. In the morning, facts and statistics were presented to show inter-relationships among all sectors and cumulative affects of numerous land uses. Experts representing forestry, energy and minerals, agriculture, urban development and environment, wildlife and tourism and recreation spoke about the affects of land use issues on their sectors. Key points of each speech are provided below.

Brad Stelfox of Forem Technologies and **Shawn Wasel** of Alberta-Pacific Forest Industries were the first presenters. As ecologists, they painted a picture of the province in terms of its diversity and abundance. They explained that our extraordinary diversity in flora and fauna, exceptionally rich renewable and non-renewable resources and significant variation in ecological structure and composition are products of centuries of change. Both environmental (glaciations, flooding, fires etc.) and human activities (farming, forestry, mining, transportation, recreation etc.) have contributed significantly to these changes. Our landscape continues to be affected by these natural disturbance regimes and human land use activities.

Drawing on real historical examples of land use in Alberta, three distinct phases of land use were depicted. The first is human exploitation of the landscape. This included cultivation of native prairie lands, an expanding wave of population and distribution of livestock, the allocation of commercial forest lands to the forest sector, and the emergence of the energy sector into previously pristine landscapes. This phase is now complete.

The second phase, according to Stelfox and Wasel, describes most of Alberta today – land uses are actively competing with each other for space. Historically competition has intensified the disturbance on land because industrial land users are competing but not communicating effectively with each other. Increased disturbances caused by multiple overlapping land uses have lead to decreased sustainability of some land uses.

The third phase has now begun in Alberta, according to Stelfox and Wasel. Competition for land is forcing industries to adopt more intensive practices. There is no new land to expand into. This more intense use of the already occupied land involves more Concentrated Feeding Operations (CFOs), more irrigation, increased dependency of plantations by forestry to meet shortfalls and more aggressive site preparation techniques to maintain cut levels in forests.

Stelfox and Wasel suggested that one of the first steps to mitigating some of the disturbances to our land is to continue to talk among ourselves. Discussion will allow us not only to understand each others challenges but also to determine what we want as Albertans in terms of water and air quality and other attributes. They reiterated Dr. Thomas' finding – all things are interconnected. All land practices have two sides. "They all, without exception, create benefits whether they be revenues, royalties, employment or economic prosperity. All of them, without exception, create problems and liabilities. They all have a waste product stream, they all affect each other, they all have an upside, and they all have a downside". Stelfox commented that "...to what extent can adverse effects of lands' uses be mitigated through effective integrated landscape management? This is a critical challenge facing not only the government but also Albertans in general. Clearly some level of strategic level planning must be embraced. Albertans need to decide what we want our future landscape to look like and agree on a plan to achieve that vision.

Five industry representatives followed the speech by Stelfox and Wasel. Each provided data on his specific sector.

Bob Demulder from the Alberta Forest Products Association explained that the forestry industry was one of the first sectors to consider land use issues when they began managing forest management agreements or quota agreements. He described a simplified view of land use in forestry as managing for fiber and non-timber value. Fiber is the harvest quality and quantity within a defined area (the health and number of trees available). Non-timber value is "the ability of the forest to provide environmental, social, cultural, recreational benefits to society."

These two management themes are linked according to Demulder. These also do not take into account other industrial or social impacts on the managed land. This is important since forests take from 80 to 120 years to grow, and other industry activity levels must be considered over that entire life cycle. Over that time, societal values change or an area may become of interest to other sectors such as for gas exploration or pipeline or transportation corridors. Foresters have always had to consider multiple land uses.

The challenge for the forest industry, said Demulder, is to determine acceptable levels of resource use to stay in business while considering assessing the impact on society's rights, values and expectations. Part of this challenge is that there are forest land base conversions or "Type your question here and then click Searchdeletions" as the forest industry describes them. These deletions can be reduced or mitigated. Demulder provided options that have been available to the forestry sector. These options relate to what Stelfox and Wasel discussed – integration with other sectors, or they can intensify fibre yields on remaining areas. But, increasing yield is expensive.

The forest industry, according to Demulder, supports the principles and strategies of integrated resource management. As non-timber values are raised in importance, timber value drops because fewer trees can be harvested sustainably. Demulder asks what will happen if non-timber values and other land uses are increased beyond the forest sector's ability to compete?

Demulder then listed other issues of interest to the forestry industry. These include: standardized reclamation rules, consolidation of regulating bodies, introducing new technologies and sharing and coordinating data. Resolving these issues, he said, will take the combined effort of all industry sectors as well as the government and a variety of public stakeholders. He suggested that some of this has already begun and that we have good examples of where stakeholders, industry and government are already cooperating and planning together. "This will become the norm, rather than the exception".

Roger Shaneman is Manager of Resource Access for the Canadian Association of Petroleum Producers (CAPP). He provided an oil and gas and pipeline perspective. He started with some facts.

Alberta holds at least fifty percent of the gas that will be used in the next 20 years. The costs associated with developing that gas is fairly constant at thirteen dollars for each barrel. The costs associated with finding new reserves are about one-hundred dollars for every acre explored. The return on capital investment is not as large as people think. From 1990 to 2000 return on capital

was only four point four percent. Apart from profits that are not as large as the industry is concerned with sustainability.

He defined sustainability as "allowing the industry to continue to operate and exist in Canada and to do what we do." The priorities of the industry are competitiveness and environmental health and safety stewardship. He said that although the industry sets its own standards, they exceed regulatory standards. The industry was described as also being interested in access to resources, aboriginal first nation's policies, and access to market, an open and constructive government and public and media dialogue.

The mission of CAPP, which represents 90 percent of Canadian industry, is "facilitate and enhance industry sustainability by balancing three pillars of sustainable development; environment, economy and society." Specific goals include demonstrating commitment to and verification of continuous improvement, enhancing credibility with stakeholders, exhibiting a high level of adherence to industry standards. He said that CAPP is building bridges through their stewardship program, and work with specific programs such as the Integrated Land Management Program and by participating in an industry-land owners' relations program with the Energy Utilities Board.

Dean Smith, Project Manager of the Prairie Agricultural Landscapes: A Land Resource Review, used statistics and studies to advocate balance in our use of land. "If, the agriculture industry and governments fail to recognize legitimate community interests, [agricultural] development ... is likely to face increasing harassment and corresponding legal action over air and water contamination or land use conflicts. At the other extreme, he said, if society is over zealous in regulating agriculture, the industry could be stifled ...and result in loss of employment and... loss of economic opportunities."

Smith provided a chronological history of land ownership to show that despite shifts in the ownership, the amount of agricultural land in Alberta has remained relatively constant. He went on to say that the use of the land has changed. Pastureland has been seeded and the amount of summer fallow has decreased significantly in favour of extending crop rotations or making crop production more intense.

Land use and farming practices have evolved to match the various climates, soil types and landscapes, Smith said. Discussing the landscape in terms of various types of farming systems or agricultural land practices, he identified five major groups comprised of thirteen sub-groups.

"The identification of land practice groups," Smith said, "provides a basis to predict changes in agriculture land use and land management. Each of the groups ... described will behave differently to pressures [from] market opportunities, technological advances, government policy and environmental and social concerns."

The challenges for industry and policy makers, according to Smith are to: respond to the real (not perceived) environmental impacts of agriculture, understand the diversity and geographic distribution of unique farming systems and different agricultural land uses and then develop a land use planning approach that strikes a fair and effective balance between agriculture, the environment and the broader rural and urban communities.

Paul Taylor, Chair of Calgary's Chapter of the Urban Development Institute, discussed how developers can meet the needs of people better, more efficiently and more responsibly in the future. Land use, Taylor said, is fundamental to developers and a better job must be done at recognizing and planning for the growth of our province.

Taylor discussed land use from the developer's point of view in terms of growth and affordability. "We are showing signs of sprawl," Taylor said, "and as we have seen in the states this brings with it some very harsh realities, we must plan for or plan around this harsh reality."

Growth is not an option or a choice, he said. It is a reality and a necessity. He went on to say that growth is the only way we will be able to deal with some of the problems created by growth. The tax base will increase allowing for more regionally based services to be funded. The reality of growth -- its liability, solutions and support and related issues -- must be addressed by everyone.

When faced with questions of density, Taylor said, society gets bogged down in perceived issues of land value rather than discussing issues of environment, society and safety. Density requirements and perceptions change with most scenarios, he said. When considering it, much has to be considered: proximity to services like transportation options (roads, mass transit), infrastructure needs (water, sewer, environmental issues such as proximity to sensitive areas, the general lay of the land or agricultural use). It is a question of maximizing the use of the land. "If we do not allow for an appropriate amount of density for projects," Taylor said, "economically we are not able to provide services and certain planning styles, environmental, social and affordable issues will be compromised in the quest to support growth."

Even affordability is a balance, Taylor said. There must be a range of land use provided in community settings, which are defined as areas of a few hundred acres. The growth of our province, he said, has an environmental effect that must also be considered. Houses must reflect a balance between earning capacity and environmental and servicing concerns.

Taylor finished by restating the growth is necessary for cities to survive. He asked that municipalities and politicians lead us through a process that will allow good planning to sustain growth. He challenged the audience to continue to talk and find action plans to solve our land use challenges.

Tom Cameron is a Professional Biologist with Alberta Sport, Recreation, Park and Wildlife Foundation. He introduced himself as an environmentalist. He outlined some of the current issues and concerns related to environment, wildlife, tourism and recreation in Alberta.

His talk began with a list of what he called hot environmental topics. The list included health issues related to air quality and petro-chemical industry and power generation; food concerns related to pesticide residues and to genetically modified crops and climate change. These, he suggested, have come about because the earth has and will continue to adapt to any changes that occur. Citizens, therefore, should be more pro-active in deciding the changes allowed.

The central theme of his presentation was that the assumed high quality of life in Alberta was endangered, and that conservation and tourism initiatives are an opportunity for rural communities and municipalities to diversify beyond the traditional and declining agricultural industries.

All Albertan's, he said, are stakeholders in the future. He ended with a statement from one hundred Nobel Prize winners that was made on the 100th anniversary of the prize itself. They gave a warning that our security rests on environmental and social reform. To survive in the world we have transformed, we must learn to think in "new ways" and as never before the future of each depends on the good of all.

Needs, Future Trends and Opportunities (Plenary Session)

In the afternoon, delegates heard from peers representing the same sectors as the morning plenary. These experts focused on the needs of their sector and its impact on other sectors. Each speaker presented some ideas as to how industry can move towards some desired directions. Key points of each are provided below.

Stan Boutin, the Industrial Research Chair for Integrated Landscape Management at the University of Alberta, was the first to speak. He spoke for the Forestry sector.

Since every sector is attempting to grow over time, he said, there are still only the three options available to maintain growth. These options were presented by Stelfox and Wasel. They include: looking for more land, going to more intensive operations or moving to some sort of value added approach. Boutin went on to say that a combination of these options will probably be used. However, he said, there are a lot of other players in the same sandbox.

Boutin explained the difficulties of forest management, and he said that the future will intensify land use. He named two needs and opportunities that he thought were generic. One is the pursuit of best practices by industry. This includes reducing the size, intensity and duration of our human disturbance. It also includes the expansion of various industries working together on the same land to reduce their combined disturbance. The second need that Boutin discussed was the creation of an effective land use planning framework. This is crucial and needs to recognize that we have a finite land base.

What we need to do to create an effective land use planning framework, said Boutin, is to answer three questions: "Where do we want to go, how to get there and, as importantly, how do we actually know when we've arrived at where we wanted to go?" One of the key aspects is stakeholder consensus – a collective vision. If we do this, he suggested, we meet the reality of a finite land base head on. The first step is agreeing to learn the overall issues. Using tools, like Stelfox's ALCES model, assists us with dealing with those issues, but, more importantly, it shows tradeoffs over a broad landscape. It also shows the implications of your management decisions over time. It is crucial to explore the implications of those decisions over the broad range of stakeholders. One key aspect that tends to get left out is to track how well our land use planning is actually proceeding. We do that by indicators, by setting up comprehensive monitoring programs for all types of land users.

Peter Koning, a member of the Integrated Landscape Management Program, Alberta Chamber of Resources, spoke from an energy and minerals industry perspective about issues facing all resources industries. He also discussed a new program called Integrated Landscape Management. He began his talk by discussing the many and varied challenges facing the resource extraction sector.

Koning mentioned the complex regulatory maze, issues of dealing with multi-stakeholder reviews and greater expectations from international publics are adding to the cost of resource management. Koning then suggested that the solution was already captured by the World Council for Sustainable Development. "We can manage cooperatively what we cannot manage individually" they said. "This is the very old, powerful idea called community."

To address issues cooperatively, Koning said, leaders from across industry were brought together to form the Alberta Chamber of Resources' Integrated Landscape Management (ILM) Program. Their vision is the maintenance of sustainable landscapes and economically viable industries. This can be achieved, he continued, by the careful integration of activities, science-based decision making and the minimizing and mitigating of impacts from industrial activities.

A key component to achieving the vision of the Alberta Chamber of Resources is the integration of best practices. These practices reduce the size and duration of industrial and human activity. Alberta Chamber of Resources continues to assemble state-of-the-art ways of reducing impacts. They have also helped establish a Research Chair in Integrated Land Management at the University headed by Dr. Boutin. This university Chair performs research that helps us better understand how ecosystems respond to our activities and the value of our best practices.

Koning also suggested that we need to do a better job of tracking our land use. By measuring the right aspects of our land use, he said, we will in effect become more land use conscious and manage our activities accordingly. Proper measurement is meaningful to stakeholders with respect to protecting the environment, allow for consistent tracking and benchmarking and inform decision makers so as to continually improve performance of the organization.

Koning also discussed market-based instruments. He quoted the World Business Council for their solution to providing value to our environment in order to increase its importance and our desire to protect it. They suggest turning part of the environment commons into tradable commodities. "Proper valuation," Koning suggested, "will help us maintain biodiversity, habitats and ecosystems as well as conserve natural resources, preserve the integrity of natural cycles and prevent the build-up of toxic substances in the environment."

Koning asked the audience to consider discussing how others would answer a question. "What aspects of my land, when tracked, will make me land-use-practice conscious?" Since the Alberta Chamber of Resources was forming a group to explore this, he encouraged the audience to get involved. He ended by saying that smart companies, and smart communities, are recognizing that the most effective way to leverage change in our inter-dependent world is through common endeavor with others and learning from the experience.

Brian Heidecker was co-chair of Ag Summit 2000. His talk reinforced and built on some of the findings of previous speakers. He first outlined the concerns within the agriculture community and their industrial targets at the time and indicated how those led to discussions in the Ag Summit 2000. He also discussed rural viability. Major development along the Highway 2 corridor (Edmonton to Calgary) and severe de-population in other areas (especially eastern Alberta) has led to a divergence of rural and agriculture policy.

Despite the challenges facing Alberta; the accommodation of growth in all areas, the maintenance of wildlife habitat, sustainability of air and water quality as well as other production systems and greenhouse gas issues, Heidecker had a positive attitude. We will meet the challenges facing us, he said, and discussed the various options.

Heidecker indicated that one of the loud and clear messages from the Ag Summit is that land use planning needs to move to the collaboration model. "... [W]e've moved from managing commodities and commodity type products to where we've got competition and we're dealing

with the overarching issues and the challenges. You simply cannot come up with sensible solutions to those if we're not talking and collaborating and understanding what it's all about". Heidecker felt that what was required is leadership from all stakeholders as well as guidance and support from the provincial government. He said that sectoral targets are also needed and a commitment to get each sectors' fair share of the work done.

He reviewed some of the past history of land use planning throughout the province and commented that a lot of plans were based on political boundaries. He wondered how watersheds or air sheds that cross municipal jurisdictions could be managed effectively. Breaking the province down should at least be based on drainage systems or something of that nature.

The agriculture sector has an industry plan, he said, it is based on collaboration and understanding of other sectors. The sector is also willing and able to work with whomever wherever to achieve mutual goals. Let's determine what spaceship earth is going to look like ten years from now and make it happen.

David Baxter, Executive Director of the Urban Futures Institute, explained the challenges that will face communities. He offered no solutions but described the challenges as change management and growth management.

Alberta, Baxter said, is an urban province. He uses statistics to show that the vast majority of growth over the last fifteen years has occurred in Calgary and Edmonton and along the corridor that joins them (Highway 2). The province will have to address this rapid growth while looking at decline or abandonment in some smaller urban areas, he said. However, each community will have to find the solutions that reflect its own values.

Each solution will need to address the needs of a growing and aging population and infrastructures as well as chronic labor shortages. An aging population, as the bulk of baby boomers get older will cause health care costs to rise as labor participation rates decline. Baxter's indicated that in order to maintain a population that is living longer and not replacing itself because of low birth rates, the province, he said, like the rest of Canada will be dependant on labor force migration. Even so, growth will happen.

If, Baxter said, Canada can achieve its needed migration and immigration targets, Alberta will grow by millions in the next three decades. This could mean that both Edmonton and Calgary grow by almost one million people each. The number of young adults will increase and because baby boomers are aging there will be a doubling of the number of people from sixty-five to seventy nine years of age. If everyone wants to live in new homes, it will take a great deal of land to accommodate that growth, Baxter said. However, with proper change management and growth management it can be effectively done. To minimize the impact, he suggested that there is an opportunity now to change behaviors, starting with our own. "Can urban areas afford to run new pipes and new roads past empty communities to service the new communities?"

Lorne Fitch, a Provincial Riparian Specialist with the Alberta Fish and Wildlife Service was the final speaker of the afternoon. He spoke about Alberta's landscapes, environmental health and biodiversity. He then presented information about how we envision the trends, opportunities and challenges involved with managing them.

Our present landscape, Fitch said, is a legacy of our past. He described Alberta's natural history and how it modified and molded the area and provided a biodiversity before human presence. People, he said, were attracted to this biodiversity and as we exploited it we continued to cause change. At first, Alberta was a frontier of large open spaces with few people. Because the area was thought of as a frontier, people modified it as such.

Fitch then provided examples of change in the landscape that occurred due to incremental and additive decisions over time. Reiterating the findings of some of the previous speakers, he developed a picture of a landscape that is a product of many land uses overlapped in space and time. Transportations networks, intensified agriculture, cleared land for mining, oil sands, peat and coal extraction, electricity needs (locally and for export) gravel mining and the needs of urban centers each added to the accumulative reshaping of the landscape.

To make his point, Fitch pointed to the irony in a newspaper ad for rural subdivisions and acreages. The things that were advertised, such as abundant wildlife, hunting, boating, skiing, fishing and others, are the things that are diminished as more people move to take advantage of them. He also pointed out that these attributes that individuals are moving to take advantage of things that occur on land surrounding rural acreages not on the acreages themselves. These individuals are capitalizing on someone else's space until that space disappears and the individuals who crave them need to move further away. This is one way the city encroaches on the surrounding area.

Maximizing economic opportunity may be at the expense of environmental quality, he said. Using research ongoing for seven years, Fitch quantified the percentage of landscape by its ability to provide riparian function (only 17 percent is healthy and 44 percent is at risk and the remainder – 39 percent – is unhealthy.) If we continue to want to do everything, everywhere, any time, all the time, he said, we risk irrevocably breaking the strands and linkages that maintain the diversity of Alberta's plant and animal life that provide critical ecological services and sustain us.

One of the things we can learn, Fitch said, is that conservation and stewardship are not about maximizing every opportunity, but it is about using restraint to sustain opportunity. He lists a number of things that society must learn in order to change our approach to using the landscape. Then he asked the audience to think about the future so that a vision can be developed that could help maintain our healthy, functioning landscape.

Identify Solutions and Options (Concurrent Sessions)

The morning of the last day of the conference involved concurrent sessions. Delegates selected sessions that interested them. Numerous two-hour presentations were made that were aimed at identifying solutions and options. Major topics included; Addressing Urban Sprawl, Preservation of Agricultural Land, Environmental Stewardship Incentives, Aboriginal Land Use Issues, Landscape Planning, Evaluating Landscape Suitability and Impacts and Organization Examples.

Where To From Here? (Plenary Session)

In the afternoon, four speakers from key sectors provided their observations of the conference and proposed an outline for next steps in the process. The key points of each speech are provided below.

John Donner, Assistant Deputy Minister for Strategic Directions in the Alberta Environment was the Moderator. He provided some details as to why he was there and spoke about the integrated resource management commitment of the government.

The commitment is recorded, Donner said, in the *Commitment Document* published in 1999. It states that we must ensure that our natural resources and environment are managed for the greatest public benefit and in a fashion that supports Alberta's economic, social and environmental aspirations. The document itself is a summary of the activities that are part of achieving sustainable development, integrated resource management and decision making. Actions are ongoing.

The process by which the commitment is being acted upon is a series of activities that collectively is known as integrated resource management. It looks at coherence and coordination of policies and legislation and detail on the ground. It is characterized, Donner said, by consultation and involvement at all levels. The action plan involves elected individuals in municipal governments.

The Department of Environment is responsible for integrated resource management, a cross-government initiative focused on achieving multiple sustainable development objectives. It is coordinated through the Sustainable Development Coordinating Council. It reflects the government's commitment and cross-government support for regional sustainable development strategies, Donner said.

Donner then introduced the first of three speakers who would recap the messages of the conference and provide their perspectives in terms of moving forward.

Faye Street of the East Kootney Livestock Association was the first to speak. She complemented the organizers of the conference and recognized the appropriateness of the title – *The Land Supports Us All*. While holding up an apple, Street used it to represent the globe to make the point of our scarcity of our land resource. As she listed the surfaces of the earth that can not be used to grow food, she removed a similar ratio of the apple. She was left with a section of peel from one thirty-second of the apple to represent the total amount of topsoil that

man depends on. How we use this tiny piece of land, she said, will determine if the world eats, if wildlife continues and if we have any rainforests. Land use is the world's biggest crisis.

Street encouraged everyone present to continue the momentum. She explained that life's basic needs are food, water and shelter. She used examples to show that if we do not have those basic needs, other higher needs such as wildlife protection, good education or more consumer goods don't really matter. The only thoughts hungry people have on eagles, spotted owls and salmon, Street said, is how good they would taste.

Let's work together, Street urged. Let's make sure that no generation faces a food shortage and that we always have good green forests to harvest, and that our mining industry stays healthy and productive and that we share our land base for its highest and best use. She spoke about actions already started – a coalition of British Columbia's three resource based industries, and her work educating consumers and reducing the gap that has developed between them and the food producers.

Street urged people to get involved. Organize, plan, educate and start work on the next conference. Listen to other groups, she said. Collaborate, cooperate and succeed. She ended her talk by asking a number of pertinent questions that will start people thinking about and discussing what she termed the world's biggest crises. Let's not waste what we can not replace, she said.

Peter Miller from the Land Resource Partnership of Alberta Chamber of Resources brought together some of the themes and the directions observed and heard. He recognized the main theme as the need for change and how we can manage it.

It was very clear, he said, that doing the same things in the same way is not sustainable for the environment or the economy and will not achieve society's goals. This conference shows that various players are willing to work together and discuss a combined vision. What he saw emphasized at the conference was that we are also willing to reconcile and work out conflicts and address challenges and clarify priorities.

Miller mentioned two initiatives, the *Natural Heritage Act* (Bill 24, 1999) and the *Agricultural Dispositions Statutes Amendment Act* (Bill 31 November 1999). Both of these are examples of where policy considerations have to be reconciled and priorities set. Despite the fact that many of these issues are being determined in the courts, they are not legal issues. They are really policy and political issues, he said. Because we live in a democracy the onus is on us as community members to get down to these issues and start working on them ourselves and through our political representatives. More solutions are being determined by stakeholders getting together and agreeing on a compromise.

Miller agreed with the three phases of development introduced in the presentation by Stelfox and Wasel and discussed by others. We are moving to a more cooperative phase. This is the most significant thing that came from the conference, he said. We are working together and creating opportunities together without taking opportunities away from others. This challenges us to change the way we look at problems.

The value of the Land Use Conference 2002, he said, is that various stakeholders have come together – government, industry, recreational and environmental groups and agriculture. Having been at the conference, Miller asked that we make a clean break away from the problematic aspects of the competitive phase of development and develop in a consensus type forum.

Alan R. Musselman, a Land and Community, Land Conservation and Planning Consultant from Pennsylvania, was the final speaker. He presented his observations and provided feedback from his experience in a similar resource based state, Pennsylvania.

He first stated that people on a global scale need to very consciously make the effort to save scarce resources for future generations. This conference was a great example of how to begin. It recognized the resource base and the changing realities involved with managing the resources. Many speakers, he said, spoke of developing a vision for increasing the yield and prosperity from our resources. However, said Musselman, the vision as stated is far too limited. Alberta has the resources and wealth to extend our prosperity to many generations ahead. The ten year vision expressed by most speakers is far too short term.

Instead of just maintaining our resources, land base and environment for economic reasons only, we need to expand our vision to everything we do in our lives, personally and in our work. Pennsylvania, he said is like Alberta in that both places are largely agricultural with similar population densities and resource based, but it has three-hundred years of history. Because of their dependence on resources they determined that they had to protect and preserve what was the character, the integrity, the productivity and the future of the community. The vision of preservation must encompass everything we do, not just economics.

A second observation by Musselman was that all speakers discussed the quantity short-term goals of their sector first. Everything, he said, sounded like it was going to double. Then in the afternoon, speakers presented their quality goals. Land and water are imperative for our future. These goals, he said, need to be reversed. It is the quality goals that are going to maintain aggressive quantity goals over the next ten years and into the next sixty years and for future generations.

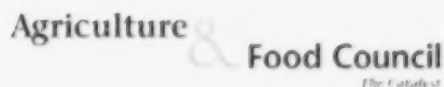
We have the tools to make the needed changes, Musselman said. We are just not using them. Two decades ago, he explained, people in Pennsylvania were inspired by a conference. They stopped accepting the *status quo* and they started working on a personal level to make changes happen. Elected officials were petitioned, letters written, discussions took place in coffee shops, and people spoke at local meetings. It didn't start at the top, he said. Then, addressing the audience he said "it's going to come from you". It took years and much debate but resulted in the institutionalization of a land ethic. The result is that all farmland is protected and more than ten percent is preserved. Musselman suggested that the planning process identify important, cherished and sacred resources so priorities can be set. The challenge, he said, is to maintain the character, the integrity, the environment and ultimately the economy of the province.

Notes

Appendix A – Contributors

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